GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Animal Husbandry Department – "Fodder Security Policy for Livestock-Andhra Pradesh 2015-2020" – Orders – Issued.

ANIMAL HUSBANDRY, DAIRY DEVELOPMENT & FISHERIES (AH.I) DEPARTMENT

G.O.Ms.No.18 Dated: 30-06-2015

ORDER:

The Government of Andhra Pradesh is aiming at achieving double digit growth in GSDP in Mission node approach. Based upon the clear understanding about the concerns and challenges in Primary sector, the government has devised specific target oriented Strategies. The Government have identified Livestock sector as one of the Growth Engines for socio-economic development of the new State of Andhra Pradesh. The Vision 2029 promotes rational exploitation and utilization of the state's Agro-climatic conditions in a manner consistent with the overall goal of sustainable development.

2. The Livestock Sector, which provides bulk of the protein to human nutrition, contributes 7% of GSDP and 26% of Agricultural Domestic Product. The Livestock sector has a good growth potential. However, further growth of the sector is mainly dependent upon availability of fodder and on breed improvement. One of the major challenges is huge shortage of fodder, more so during drought situations and in summer.

3. In this context, a comprehensive fodder security policy to increase production and to ensure faster growth of the livestock sector is inevitable. The objective of the fodder security policy is to realize a developed animal fodder industry that contributes significantly to improved animal production and reproduction.

4. Government with a view to increase production, productivity of Livestock and promote sustainable dairy in the State hereby introduce "Fodder Security Policy for Livestock 2015-2020". The detailed Policy document is appended as annexure to this order.

5. Under the Fodder Security Policy for Livestock 2015-2020, the Government hereby approved the Fiscal incentives covering the categories as detailed below:

5.1.0. Promotion of Certified fodder seed production :

5.1.1. Every year the Government will give buy back guarantee for procurement of required quantities of certified fodder seed from the agency / entrepreneur with prior agreement.

5.1.2. The certified fodder seed so procured, will be distributed to the needy farmers on 75% subsidy.

5.2.0. Perennial fodder production:

5.2.1. The Government will undertake as much area of perennial fodder development activity as possible every year with 100% support including the support from MGNREGS.

5.2.2. The farmers willing to cultivate perennial fodder cultivation with micro irrigation facility will be supported with 90% subsidy on the drip irrigation system.

5.3.0. Promotion of Silage as green fodder :

5.3.1. Individual farmers who wish to go for silage bunkers, 100% subsidy will be extended towards the cost of bunkers including the support from MGNREGS.

5.3.2. FPOs which want to promote fodder silage production, 100% of the cost of bunkers along with the cost of maize cultivation will be met from Government including support from MGNREGS.

5.3.3. The identified Entrepreneur who is entrusted with silage bale production by the Government will be supported with 50% subsidy on the cost of equipment, 25% as margin by the Entrepreneur and the remaining 25% cost of equipment as Government advance which however will be recovered from the amount payable every year to the entrepreneur towards the cost of fodder silage for which the Government will give buy back agreement.

5.4.0. Production of Fodder blocks with Fortified Maize stovers :

The Government will give 50% subsidy on the cost of equipment, 25% as margin money by the Entrepreneur and the remaining 25% cost of the equipment as Government advance, which will be recovered from the amount payable every year to the entrepreneur towards the cost of fodder blocks for which the Govt will give buy back agreement.

5.5.0. Baling of machine harvested paddy straw :

5.5.1. The Government will give subsidy on fodder bales.

5.5.2. The cost of baled fodder will be fixed by the Government.

5.5.3. The farmer will be distributed baled fodder at subsidized rates.

5.5.4. The difference between the total cost of baled fodder and the distribution cost will be supported by Government as subsidy.

5.6. 0. Azolla Production:

The Government will promote Azolla in a big way by providing 90% subsidy.

5.7.0. Farm Mechanization :

5.7.1. On all farm equipment distributed to the individual farmers, the Government will give 75% subsidy except for the equipment related to micro irrigation.

5.7.2. The equipment related to micro irrigation will be given on 90% subsidy by the Government.

5.7.3. The equipment placed in custom hiring centers will be supported with 100% subsidy by the Government.

5.8.0. Fodder Bank :

5.8.1. The Government will provide 100 % subsidy for construction of godowns at needy places.

5.8.2. The fodder procured on agreement by the Government will be stored at these fodder banks.

5.8.3. The distribution cost of silage bales / dry fodder bales / maize stover blocks will be decided by the Government from time to time.

5.9. 0. Inter Cropping of fodder crops in Horticulture groves:

5.9.1. The activity will be promoted in convergence with Horticulture department.

5.9.2. The Government will support inter cultivation of fodder with 75% subsidy in the form of supply of leguminous fodder seed varieties in as much extent of area as possible per year.

5.10. Fodder cultivation with IWMP funds:

5.10.1. The Government will promote fodder development activity in water shed areas with special focus on development of pasture / degraded pasture lands including fodder tree plantation in convergence with Rural Development Department with 100% subsidy support.

5.10.2. Fodder development will be taken up in water shed areas as per the availability of funds every year.

5.11.0. Tank bed fodder cultivation:

5.11.1. The Government will promote tank bed fodder cultivation in perennial drought prone districts.

5.11.2. The activity will be promoted with community participation on 100% subsidy including cultivation cost.

5.12.0. Rejuvenation of CPRs (Common Property Resources):

5.12.1. The tools and equipment required along with the cost of fodder seed besides fencing cost will be supported with 100% subsidy by the Government.

5.12.3. Every year, the Government will undertake rejuvenation of degraded CPRs including local bodies/identified agencies in as much area as possible to rejuvenate the CPRs.

5.13.0. Promotion of fodder cultivation in Forest fringe areas :

5.13.1. The fodder development activity in forest fringe areas will be promoted only through VSS (Vana Samrakshana Samitis).

5.13.2. The Government will support the fodder development activity in forest fringe areas with 100% subsidy.

5.13.3. The Government will support for undertaking fodder development activity in as much area as possible in forest fringe areas.

5.14.0. Plantation of saplings that can yield fodder :

5.14.1. The Government will support this activity with 100% subsidy.

5.14.2. The Government will support plantation activity involving NGOs / Local bodies / Sheep societies in as much area as possible.

5.15.0. Promotion of Hydroponic Fodder as commercial activity :

5.15.1. The Government will support the activity on 75% subsidy for establishment of the unit.

5.15.2. The Government will support this activity every year to encourage new units.

5.16.0. Fodder development in vacant Government land:

5.16.1. To encourage cultivation of fodder in vacant Government lands where ever 100 acres of cultivable land is available in the districts.

5.16.2. Rs. 500 lakhs will be provided by the Government as corpus fund to develop infrastructure required for cultivation of fodder in the common land.

5.17.0. Special package for natural calamities:

The Government will keep a corpus fund of Rs. 1000 lakh to continue the existing policy of the Government to supply dry fodder and concentrate feed at concessional rates on all the occasions of natural calamities.

5.18. 0. Rewards & Recognition:

The Government will provide Rs. 50 .00 lakh every year to the department to give rewards to those local bodies & NGO organisations which have actively participated in the community fodder development activities.

6. Infrastructure Strengthening / Development:

Construction of fodder banks will be considered on a priority basis at block/mandal Headquarters of all fodder stress mandals in Rayalaseema districts.

7. Market Development

i) Sale of dry fodder blocks/silage bales will be promoted through the extension net work proposed to be created in addition to the marketing of product through village organizations involving SERP

ii) Built in Incentive will be extended to self help groups to encourage Thrift & Micro-credit for market development of fodder and income generating enterprises for reaching the 'unreached'.

8. Public Private Partnership

Infrastructure facilities like silage balers, hay balers, fodder block making units, heavy duty chaff cutter, crop harvesters, pivot irrigation equipment etc along with all facilities required will be supported.

9. Institutional Strengthening

i) Monitoring is an essential component for successful implementation of the policy. Mechanism such as "State Level Steering Committee" shall be constituted in the Animal Husbandry department for implementing this policy.

ii) A task force committee headed by Principal Secretary, AH, DD & F as chairman, Director of Animal Husbandry as member convener and other major stake holders as

members shall be constituted to deliberate on the issues concerning implementation of fodder policy.

iii) At District level, the District Level Committee (DLC) headed by Joint Collector (Primary Sector Mission) shall monitor the implementation of the Policy.

iv) The extension personal required for implementing this policy will be recruited by Animal Husbandry department.

10. Government also agreed to prepare the Fodder Policy for Rs: 250 Crores (Rs: 100 Crores from Government Funds and Rs:150 Crores from MGNREGS). Action plan be prepared and implemented by the Department as per the provisions of Fodder Security Policy for Livestock 2015-2020.

11. The Policy will come into operation from the date of issue of this order and shall remain in force for five years or upto 31-03-2020.

12. The Head of the Department, Animal Husbandry, A.P. Hyderabad shall take necessary action in the matter accordingly.

13. This Order issues with the concurrence of Finance (EBS.II) Department vide their U.O. No. 3276/175/A2/EBS.II/2015, dated:25-06-2015.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

Dr. MANMOHAN SINGH
PRINCIPAL SECRETARY TO GOVERNMENT

To
The Head of the Department, Animal Husbandry, A.P. Hyderabad.
The CEO, APLDA, Hyderabad.
The MD, APSGDCF Ltd., Hydrabad.
The MD, APDDCF Ltd.A.P. Hyderabad.
Copy to:
The Principal Finance Secretary, Finance Department.
The Special Chief Secretary to Government, PR&RD (RD)Department.
The Secretary to Government, PR&RD(PR) Department
The Special Chief Secretary to Government, EFST Department.
The Special Chief Secretary to Government, A&C Department
P.S to M (Agri, AH, DD & F).
P.S to Secretary to C.M.
P.S to Chief Secretary.
The Registrar, SVVU, Tirupati.
The AGAP, Hyderabad.
The Secretary to GOI, Min of Agri, AHD&F Dept., New Delhi.
All the PSs to Ministers.
All the Distirct Collectors through HOD, AHD, A.P. Hyderabad.
All the HODs concerned through HOD, AHD, A.P. Hyderabad.
The Convenor, SLBC, Hyderabad.
The Law Department, A.P. Secretariat, Hyderabad.
All Sections in AHDD&F Dept.
The G.A(Cabinet) Department, A.P. Secretariat, Hyderabad.
SF/SC.

// FORWARDED: BY ORDER //

SECTION OFFICER

ANNEXURE

(GOMs No.18, AHDD&F (AH.I) Dept., dated: 30-06-2015)

FODDER SECURITY POLICY FOR LIVESTOCK- 2015-2020.

GOVERNMENT OF ANDHRA PRADESH

Department of Animal Husbandry

Contents

Executive Summary	6
1. Introduction	7
2. Need for a Fodder Policy	8-9
3. Challanges of fodder development	10
4. Opportunities for fodder development	10-11
5. Vision	12
6. Mission	12
7. Policy Validity	12
8. Current Scenario of Fodder status	12 – 13
9. Land use pattern in A.P.	12 - 13
10. Livestock Population & Quality of Animals	14 - 15
11. POLICY INITIATIVES	15-21
11.1 Promotion of certified fodder seed production	15
11.2 Perennial fodder production	15
11.3 Promotion of silage as green fodder	16
11.4 Production of fodder blocks with fortified maize stovers	16
11.5 Bailing of machine harvested paddy straw	17
11.6 Azolla production	17
11.7 Farm mechanization	17
11.8 Fodder banks	18
11.9 Inter cropping of fodder crops in horticulture groves	18
11.10 Integrated water shed management programme	18
11.11 Tank bed cultivation	18
11.12 Rejuvenation of CPRs involving NGOs / PPP / SS	18
11.13 Promotion of fodder cultivation in forest fringe areas	19
11.14 Plantation of fodder yielding plants	19
11.15 Promotion of hydroponic fodder as commercial activity	19
11.16 Vacant land utilization	20
11.17 Fodder development in vacant government land	20
11.18 Credit support to the entrepreneurs	20
11.19 Special package for natural calamity	20
11.20 CSR activity	20
11.21 Ration Balancing Programme	20
11.22 Rewards & Recognition	21
12 Convergence with various stake holders	21 - 22
13 FISCAL INCENTIVES	23 - 27
14 Infrastructure Strengthening / Development	27

15 Market development 27

16 Public Private Partnership 27

17 Institutional Strengthening 27

18. Policy Outcomes 28

ABBREVIATIONS USED IN THE DOCUMENT

S.No	Short form	Expanded form
1	AFDP	Additional Fodder Development Program
2	APDDCF	Andhra Pradesh Dairy Development co operative Federation
3	CPR	Common Property Resource
4	CRIDA	Central Research Institute for Dryland Agriculture
5	CSR	Corporate Social Responsibility
6	FAO	Food and Agriculture Organisation
7	FPO	Farmer Producers Organisation
8	GP	Grama Panchayat
9	GSDP	Gross State Domestic Product
10	IC	Inter Cooperation
11	ICRISAT	International Crop Research Institute For Semi Arid Tropics
12	ILRI	International Livestock Research Institute
13	IWMP	Integrated Watershed Management Program
14	KVK	Krishi Vignana Kendra
15	LMT	Lakh Metric Tons
16	MGNREGS	Mahatma Gandhi National Rural Employment Generation Scheme
17	NABARD	National Agriculture Bank for Rural Development
18	NCDC	National Cooperative Development Corporation
19	NDDB	National Dairy Development Board
20	NDP	National Dairy Plan
21	NGO	Non – Government Organisation
22	NLM	National Livestock Mission
23	PPP	Public Private Partnership
24	PSM	Primary Sector Mission
25	R & D	Research And Development
26	RBP	Ration Balancing Program
27	SAU	State Agriculture University
28	SERP	Society For Elimination of Rural Poverty
29	SHG	Self Help Group
30	TMR	Total Mixed Ration
31	VSS	Vana Samrakshana Samiti

Fodder Security Policy for Livestock of Andhra Pradesh State

It is pertinent to quote **Mahatma Gandhiji's** words here that

"the greatness of a nation can be judged by the way its animals are treated"

and Andhra Pradesh is in the process of realising these words.

Executive Summary

The Government of Andhra Pradesh has aimed to achieve **double digit growth in GSDP** in a mission based approach. Based upon the clear understanding of concerns and challenges in Primary Sector, specific target oriented strategies have been designed. The Government has identified Livestock sector as one of the growth engines for socio-economic development of the new state of Andhra Pradesh. The Vision 2029 promotes rational exploitation and utilization of the state's resources and agro-climatic conditions in a manner consistent with the overall goal of sustainable development.

The Livestock Sector, which provides bulk of the protein to human nutrition, contributes 7% of GSDP and 26% of Agricultural Domestic Product. The Livestock sector has a high inclusive growth potential. However, further growth of the sector is as much dependent upon the availability of fodder as it is dependent upon the breed improvement. One of the major challenges is huge shortage of fodder, more so during drought and summer. This is despite the state's favourable agro-climatic conditions and availability of abundant resources. The fodder being critical input in livestock production systems, the government has considered it necessary to undertake a comprehensive fodder policy to increase production and to ensure faster growth of the livestock sector.

The policy aims to help the state in augmenting various fodder resources including rejuvenation of grazing lands with PPP approach. This policy outlines the developmental objectives, management measures and the strategies to be implemented for the next five year period. The major objectives of the fodder policy are to ensure the availability of fodder during drought and summer, enhancement of production and preservation of fodder by adoption of appropriate technologies, post-harvest management to optimally utilize suitable agro-ecological conditions in the state, creation of fodder banks / storage facilities in partnership with user groups and private players and reduction of production costs.

The tangible outcomes will be doubling the milk production from the present 96.50 LMT to 160.00 LMT and meat production from 5.28 LMT to 9.60 LMT in next 5 years. The Policy will ensure sustainable management practices, institutional strengthening, focused research & development, human resource development, credit facilitation, technology up-gradation, infrastructure strengthening, Public and Private Participation (PPP), convergence approaches, woman empowerment through dairy farming.

1.0 Introduction:

Andhra Pradesh is rich in livestock resources and has 47.16 lakh cattle, 64.63 lakh buffaloes, 135.59 lakh sheep and 44.96 lakh goats which are all dependant on fodder resources of the state for their survival and production.

The state stands 4th in meat production (4.89 LMT) and 7th in milk production (90:83 LMT) of the country contributing **Rs. 33600 cr** to the state's income which is about 6.74% of GSDP during 2013-14. About 59% of the cattle and 80 % of the buffaloes in the state are improved which can yield 8-10 litres of milk per day if sufficient quantity fodder is made available. The Livestock, which provides bulk of the protein to human nutrition, contributes 26% of Agricultural Domestic Product. Livestock is an integral part of the agricultural sector that provides a renewable resource base for economic development. Milk alone contributes Rs 22,922 Cr. to GSDP, which has been considered as a growth engine by the government. The milk production in the state for the financial year 2014-15 is estimated at 96.50 LMT. The Government has aimed to increase its contribution to Rs 29,944 Cr. with growth rate of at least 25% (108 LMT's) during 2015-16. For this purpose, detailed action plan has been worked out under the guidance of ICRISAT, Nodal agency for implementation of Primary Sector Mission (PSM)

The Livestock sector has high inclusive growth potential. However, further growth of the sector is as much dependent upon the availability of fodder as it is dependent upon the breed improvement. It is the issues related to fodder that are a cause of concern. This is despite the State's favorable agro-climatic conditions and availability of resources. One of the major challenges is huge shortage of fodder, more so during drought situations and summer.

2.0 Need for a Fodder Policy

The viability of livestock industry is dependent on the genetic potential for production, good health care, balanced feeding of animals and efficient marketing of the produce. While genetic potential and health care are the prerequisites for sustainability, balanced feeding will help to increase the profitability. The profitability is directly dependent on the sources of feed and fodder, since 65-70% of the total cost of livestock farming is attributed to feeding. Efficient utilization of feed and fodder would directly contribute to increase in profitability, in terms of body growth rates, and improved fertility, which are often unnoticed by the owners.

Over the years, there have been significant efforts in livestock sector to improve production from animals. However the efforts were not adequate to give required boost for enhancing production. There are many players in livestock sector to cover animal health and breeding services. However, very few are concerned with the development of fodder resources, although fodder is the most crucial input for enhancing the production.

Livestock besides contributing to the state's economy has also been providing employment opportunities, asset creation, coping mechanism against crop failure to the farmers of the state.

Livestock being the main source of livelihoods to women in rural areas (about 69% of workforce engaged in livestock sector) is mostly owned by the resource-poor small and marginal farmers and landless labourers. Hence sustainable development of the livestock sector would lead to more inclusive development and women empowerment.

Systematic development of organized dairy marketing through cooperative model is largely successful and emulated across developing countries. The marketing / procurement network developed by AP Dairy Development Cooperative Federation have certain impact. However, the productivity of milch animals and reproduction is largely dependent on breeding, feeding and management practices which are three major pillars of Dairy farming.

Livestock production systems in India are mostly based on traditional knowledge, low cost inputs drawn from crop residues and agro-by products leading to lower productivity. In addition to this, inconsistency of fodder supply during summer or drought creates gap in supply chain. The animals require green, dry fodder and Concentrate feed to exploit its genetic potential in order to yield more production. However, there is 41% shortage in Green Fodder, 42% shortage in Feed concentrates and 20% shortage in Dry Fodder in the State.

Status of Dry fodder, Green fodder and Concentrate feed in AP for the year 2014-15			
Dry Fodder Requirement and Availability			
1	No of Livestock Units in Lakhs	141.86	
2	Fodder requirement in LMTs	255.36	
3	Fodder Availability from all sources in LMTs	205.40	
4	Net Deficit in LMTs	49.96	
5	% deficit	19.56	
Green Fodder Requirement and Availability			
1	No of Livestock Units	141.86	
2	Fodder requirement in LMTs	776.68	
3	Fodder Availability from all sources in LMTs	461.44	
4	Net Deficit in LMTs	315.24	
5	% deficit	40.59	
Concentrate feed Requirement and Availability			
1	No of Livestock Units	141.86	
2	Cattle feed requirement in LMTs	51.78	
3	Cattle feed availability in LMTs	30.38	
4	Net Deficit in LMTs	21.40	
5	% deficit	41.33	

Hence, there is an urgent need to have a fodder policy in place, to increase production and to ensure faster growth of the livestock sector in the light of continuous reduction in grazing lands, on account of increased urbanization and as a result of which there is huge reduction in crop residue availability and shortage of fodder, and this requires an appropriate comprehensive strategy to address.

The fodder Policy so evolved should facilitate fodder security, better utilization of agri-residues and Public Private partnership.

3.0 CHALLANGES OF FODDER DEVELOPMENT:

In the light of severe shortage of fodder on one hand and failure to utilize the available resources on the other, the sector has been facing the following challenges in the mission to increase production from livestock.

a) **Limited Land holdings**: As majority of dairy farmers are marginal and own small holdings for cultivation, their priority for cultivation is to produce food grains. Organized fodder cultivation on commercial lines is presently nonexistent. It is estimated that only 4.4% of the total cropped area is devoted to fodder production.

b) **Reduction of grazing lands**: Gradual transformation of agricultural lands for real estate due to urbanization has been the prime reason for reduction of grazing lands. As a result, many organized dairy farmers are forced to move towards zero grazing system of feeding, while the Small and marginal dairy farmers are left with no option to get rid of animals.

c) **Lack of preservation practices:** Shortage of fodder is ordinarily observed during every summer which is more conspicuous in the drought conditions. Except preservation of crop residues in the form of stalks at farmer level, the other preservation practices in the form of silage bales, fodder blocks, etc., are totally absent among farmers mainly due to lack of awareness about preservation techniques. Most of the crop residues are stored as dry fodder in the form of stalks.

d) **Logistics Involved in Fodder Transportation**: Due to wide gap between fodder availability and requirement with in each district, the transportation of fodder from one district to another is a major challenge because of the cost factor involved.

4.0 OPPORTUNITIES FOR FODDER DEVELOPMENT

a) **Silage as green fodder:** Maize corn silage which has 9% protein which when packed and preserved in bales can offer solution for yearlong supply of high quality green fodder irrespective of season to boon production,

b) **Straw Stalks:** Lot of paddy straw is burnt in coastal districts after machine harvesting as collection of straw manually is not cost effective.

The straw so gets wasted can be otherwise best collected and processed through baling machines and the bales so produced can be transported and stored at strategic locations in deficit areas for use as and when required.

c) **Hay:** Promotion of protein rich fodders such as Alfalfa during winter season and stored in its dry form as blocks can offer a solution to reduce concentrate feed in the ration.

d) **Ration Balancing Program (RBP):** The RBP available with NDDB under National Dairy Plan (NDP) can also offer excellent solution for formulation of balanced ration to the livestock based on the locally available resources with the farmers. This will help to reduce the cost of production.

e) **Total Mixed Ration**: TMR is a worldwide accepted best practice in feeding. The practice of mixing green fodder or silage with dry fodder and

concentrates along with all other nutrients enables a complete ration that increases digestibility and enable utilization of nutrients at optimum level.

Maize as a Solution for AP fodder crisis

- Maize is known to consume only 16-20 % of water than that of paddy crop. Area under cultivation of maize is likely to increase in Rabi from 3.3. lakh Ha to 6.6 lakh Ha in near future which can become a boon to dairy sector if a portion of green maize is converted as silage and offered to farmers in the form of bales. The residue (Stover) can be chaffed and converted as blocks after fortification for utilization as fodder.

- **Silage:** Silage in Silos and bunkers is for large captive consumption, whereas the bales are small chunks of silage which can be easily transported to various farms to feed livestock. 25000 Ha of maize crop if converted to silage and preserved, can become a million tons of green fodder for use in dairying.

- **stovers:** It is estimated that at least 2 tons of residual matter per acre is currently burnt after collection of grain, wasting lot of fossil fuels creating pollution. The residual matter wasted is estimated at 2 million tons per annum which can be used to feed our cattle. Both maize stalk and cob have more nutrition than paddy straw (stalk has 4-5% protein, whereas cob has 5-6% protein)

- The technology of preserving the maize stalk and cob residues is available to a great extent overseas. This residue if collected and preserved can be an answer to the current fodder crisis in A.P.

5.0 Vision

TO MAKE ANDHRA PRADESH A FODDER SURPLUS STATE IN NEXT 5 YEARS AND TO MAKE IMPROVED FODDER AVAILABLE AT AFFORDABLE COST TO HARNESS OPTIMUM PRODUCTION FROM LIVESTOCK.

6.0 Mission

a) Ensure the availability of fodder during Drought and Summer
b) Enhancement of Production and Preservation of Fodder by Adoption of appropriate technologies
c) Post-Harvest Management to optimally utilize suitable agro-ecological conditions in the state
d) Creation of fodder banks / storage facilities in partnership with user groups and private players
e) Reduction of production costs by value addition protocols.
f) Put in place appropriate mechanisms to ensure that the sector becomes self sustainable.
g) Create a suitable environment that can attract private sector investment through an appropriate policy support.

7.0 Policy Validity

The Policy has been framed for the period 2015-2020

8. 0 Current Scenario of Fodder Status:

The livestock available in the state is in the hands of 62 lakh small and marginal farmers as per latest GoI Livestock Census 2012. The income from livestock owned by this category of farmers is only subsidiary to them. Since these category of farmers own little land holdings, their priority is to produce food grains rather than fodder cultivation.

Hence the post harvest crop residue (mostly paddy straw) obtained from cultivated crops is stalked and used to feed their cattle which is mostly rich in oxalates and feeding of dry fodder rich in oxalates is the prime reason for drain of calcium from the body of animals which affects animal health.

As such there is a need to bring about change in the feeding habits and replace paddy straw totally with other varieties of dry fodder.

The medium and big dairy farmers who maintain organized dairies cultivate fodder required for their farms, who also face fodder crisis during summer for which a tangible solution need to be proposed.

The community lands meant for common grazing of village herds are also converted for many other proposes and as a result of which the chances of getting pasture from these categories of lands has become bleak.

Similarly, because of various other activities taken up in the forest fringe areas the availability of fodder from such sources has also been coming down.

Few varieties of trees, the leaves of which are known to be used as fodder to the animals have also been coming down in their number in the recent years due to marked shift in the policies to go for fruit bearing plantations in all social forestry programmes.

9.0 Land Use Pattern in A.P. – 2013-14:

Total Geographical area : 160.20 lakh Hectors

Sl.	Category	Total Area in Lakh Hac	% of the area to be taken from total area	Area covered with fodder in Hac.	**Expected fodder yield in LMTs/Hac
1	2	3	4	5	6
1	Forest	34.93	15%	5.20	11.96
2	Barren and Uncultivable Land	13.41	50%	7.15	16.45
3	Cultivable waste	3.92	75%	3.59	8.25
4	Permanent Pastures and other grazing lands.	2.12	75%	1.94	4.47
5	Current Fallows	10.88	80%	7.55	17.37
6	Other Fallow lands	7.92	80%	5.60	12.88
	TOTAL	73.18		31.03	71.37

There is 63.54 lakh hectars of arable land in the state in which different crops are cultivated, of which crop residue useful as fodder comes from 31.45 lakh hectars.

Although majority of the crop residue is used as fodder to the livestock, its availability and requirement does'nt match with the reality when district

as unit is taken into consideration due to the distribution pattern of livestock in the state.

10. Livestock Population & Quality of Animals:

a. Category of livestock dependant on fodder resources

Both large and small ruminants are totally dependent on fodder resources available in the state. (47.16) lakh cattle, (64.63) lakh buffaloes, (135.59) lakhs sheep and (44.96) lakh goat require fodder both for survival / maintenance and also for production.

These animals when converted into cattle units are projected as 141.87 lakh units as per norms and require 255.36 LMT of dry fodder per annum for maintenance alone and there will be 20% shortage of dry fodder in the state at any given point of time.

The State is one of the highest milk producers in India, with 96.5 LMT per annum. The dairying activity is spread across the whole state with the largest population of cattle and buffaloes in the country. The composition of livestock heads available in the state is furnished below:

(Lakh Nos)

A	**Cross-bred Cattle**	19.39
B	**Indigenous Cattle**	27.77
C	**Improved buffaloes**	34.57
D	**N.D. Buffaloes**	30.06
	Total Bovine	**111.79**
E	**Sheep**	135.59
F	**Goats**	44.96

The composition of cattle population in the State is largely Jersey Cross and HF Cross among cattle that yields about 8 ltr of milk per day with 3-4 % fat content and Graded Murrah among buffaloes that yields about _6_ ltr of milk per day with 7-8 % fat content. Although almost all villages have cattle, there are only few organized dairy farms in the state which are hardly 3000 in number spread across the state which are producing about 50 ltrs or more milk per day from each farm. Due to the increased urbanization and reduced grazing lands, the dairy industry is bound to transform into Zero grazing dairy farming in the state.

b. Composition of Animal ration

Green Fodder	**65 - 70%**
Dry Fodder	15%
Concentrates Feed	10 -15%
Minerals & Vitamin supplements	0.5%

11.0 POLICY INITIATIVES TO ENHANCE FODDER PRODUCTION IN AP:

11.1. Promotion of Certified Fodder Seed production & fodder development:

a) The Government will identify entrepreneurs / agencies who are willing to promote certified fodder seed production.

b) The entrepreneurs / agencies will identify the interested farmers in pilot sites of excellence.

c) The entrepreneur will be supplied foundation seed for multiplication who will be given agreement for buy back to the quantity of fodder seed required by the Government every year.

d) The certified fodder seed so procured will be distributed to the needy farmers on subsidy for fodder cultivation involving extension network.

11.2. Perennial fodder production:

a) This activity will be encouraged especially in upland areas where paddy crop is taken up by the farmers under bore wells. Perennial fodder crops which are more remunerative will be encouraged by supplying hybrid seed on subsidy to replace paddy crop and save ground water and support cultivation under MGNREGS.

b) All the farmers growing perennial fodder and who wish to continue the activity will all be supported with drip irrigation facilities on subsidy to conserve water.

11.3. Promotion of Silage as green fodder:

a) The Government will promote silage production with maize along with cobs involving entrepreneurs and give buy back agreement to the quantity as per the requirement of the Government every year for its distribution at concessional rates.

b) Progressive farmers in needy villages will be identified and encouraged every year by the entrepreneur to use silage as green fodder to increase production from livestock.

c) The farmers indentified will be trained in usage of silage.

d) The farmers who wish to practice silage feeding to their cattle will also be assisted with bunkers, the capacity of which will be decided on case to case basis based on the number of animals owned by the farmer.

e) Government will support FPOs for silage production to meet the needs of its members with the infrastructure support required.

11.4. Production Of Fodder Blocks with Fortified Maize Stovers :

a) The Government will identify agencies / entrepreneurs which can harvest maize stovers after removal of cobs.

b) The identified agencies will procure / import the machinery required to harvest the maize stovers, chaff, enrich and convert the produce in to fodder blocks for which the total investment on infrastructure required will be met by the Government.

c) The fodder blocks so produced out of maize Stover shall be transported and stored at the designated places as indicated by AH department for distribution to the needy farmers.

d) The Government will give buy back guarantee for fodder blocks to the entrepreneurs or private partner every year as per its requirement for the mutually agreed price.

e) The fodder blocks will be so procured will be stored in needy districts with preference to drought affected districts of Ananthapur & Chittoor.

f) The fodder blocks will be distributed to the farmers at concessional rates by the extension network proposed to be created by the Government.

11.5. Bailing of machine harvested paddy straw :

a) The Government will identify the entrepreneurs to entrust baling of the machine harvested paddy straw in coastal districts.

b) The entrepreneurs will be given a buy back assurance for the quantity required by the Government for the mutually agreed price.

c) The baled fodder will be stocked in needy places / districts.

d) The stocked bales will be distributed to the farmers at concessional rate through the extension network proposed to be created by the Government

e) The entrepreneurs will procure the required machinery on his own and produce the dry fodder bales for supply to the Government on agreed price.

11.6. Azolla production:

The Government will also promote Azolla propagation on a regular basis as it provides protein to the animals upto 25% on dry matter basis.

11.7. Farm Mechanization :

a) The Chaff cutters, Brush cutters, Fodder Baling units, Fodder Block making units, Milking machines etc., will be supplied to the identified needy farmers on subsidy basis.

b) Heavy duty chaff cutters, bailing units will be made available in custom hiring centers on 100% capital subsidy for hire purchase by the needy farmers along with other agriculture equipment.

c) As fodder production is also an on farm activity, the existing farm mechanization budget in Agriculture department will also be permitted for mechanization of all farm operations in livestock sector on 75% subsidy.

11.8. Fodder Banks :

a) Fodder banks will be established by the Government initially in Chittoor and Ananthapur districts.

b) The dry fodder either in bales or blocks will be procured from the entrepreneurs / agencies and stored in fodder banks.

c) The silage bales will also be stored in fodder banks till the bales are distributed to the needy farmers.

d) The silage bales or dry fodder bales / blocks will be distributed at concessional price to the farmers in drought affected areas

11.9. Inter cropping of Fodder Crops in Horticulture groves:

The land available between rows of horticulture orchards will also be encouraged to grow leguminous fodder in convergence with Horticulture department as this would encourage soil enrichment besides making fodder available.

11.10. Integarted Water Shed Management Programme (IWMP)

Large scale fodder cultivation activity will also be promoted in convergence with Rural Development by making use of funds available under IWMP in watershed areas.

11.11. Tank Bed cultivation:

Community fodder cultivation in tank bed areas will also be permitted by the Government in drought prone areas of the state involving stake holders to encourage additional fodder production in the state with 100% subsidy.

11.12. Rejuvenation of CPRs involving NGOs / Private players / Sheep Societies :

a) The Government will identify NGOs / Co-op. societies including private players interested in pasture development in addition to the local bodies to promote rejuvenation of CPR.

b) The tools required in operation will be procured by the organization involved at the cost of Government

c) The community involved in the rejuvenation process will be trained.

d) The fodder seed to be broadcast will be identified by the department.

11.13. Promotion of fodder Cultivation in Forest Fringe Areas :

a) Fodder cultivation within the reserved Forest area shall be taken up only through VSS.

b) The Animal Husbandry Department will provide necessary Budgetary support for undertaking Fodder cultivation within the reserved forest areas.

c) The seedless variety of Subabul, will also be promoted along with others fodder yielding varieties.

11.14. Plantation of Fodder yielding plants :

a) This activity will be promoted through NGOs / local bodies / Sheep societies.

b) Waste lands and community lands including tank foreshores will be identified by the department.

c) The plant varieties required will be suggested by the department.

d) The saplings will be raised in the forest nurseries at the cost of Government

e) The logistics required for protection of plants will also be provided by the Government

f) Multipurpose fodder trees like subabul will be given preference.

11.15. Promotion of Hydroponic fodder as commercial activity :

a) Entrepreneurs / NGOs will be identified by the Government

b) The entrepreneur will establish low cost hydroponic fodder production unit at 75% subsidy.

c) The fodder seed required will be procured by the entrepreneur himself.

d) The fodder produced in the unit will be consumed by himself or marketed by the entrepreneur to the needy farmers on cost to cost basis.

11.16. Vacant land utilization:

The land available with the institutions under the preview of AH Department or any other department including those of canal bunds, road margins will be put to use for fodder cultivation under PPP with the consent of concerned departments by allotting land initially for one year and subsequently further renewal based on performance.

11.17. Fodder development in vacant Government land:

Where ever vacant Government land is available in blocks of atleast 100 acres of cultivable land, fodder cultivation will be promoted involving SHGs after demarcating plots SHG wise. The infrastructure required to facilitate fodder cultivation in the commons will be supported fully by the Government.

11.18. Credit support to the entrepreneurs:

The Government will play facilitation role to support fodder cultivation as bankable project to those entrepreneurs who wish to take up fodder cultivation as an economic activity to obtain bank loans.

11.19. Special package for Natural Calamity:

The present policy of distribution of dry fodder and concentrate feed on subsidized rates will be continued on all the occasions of natural calamities.

11.20. CSR activity:

All private dairies should spend 2% of their income on Animal Husbandry & Dairying which should cover fodder development activities also as part of their CSR which will help the farmer to grow fodder.

11.21. Ration Balancing Programme:

It is an activity under National Dairy Plan with which farmer will be able to feed a balanced ration by making use of the software and by using the ingredients or the resources available with him.

11.22. Rewards & Recognition:

The Government will also recognise different institutions and organizations which have done commendable work in the field of community fodder development by way of merit certificates and cash incentives.

The institutions and organizations will be rewarded every year at district and state level for the commendable work done in the field of community fodder development

The best GP and best NGO/VSS will be identified from each district based on the merit, each of which will be given a cash incentive of Rs.1.00 lakh along with merit certificate every year. Among which state level best institution / organisation will also be identified along with state level best district which will be rewarded with Rs.2.00 lakh cash incentive together with merit certificates.

All together Rs.50.00 lakh will be provided every year to give cash incentives to the best institutions/organisation.

a) Best Gram Panchayath

b) Best NGO/VSS

c) Best District

12.0 Convergence with various stake holders:

12.1. Convergence and Linkages

a) For promotion of dairying, participation and convergence will be ensured with the line departments - Revenue, Panchayat raj and Rural Development, Agriculture, Horticulture, Forest.

b) All the programmes of State, Central Government, NLM, MGNREGS, IWMP, AFDP and such other funding agencies will be implemented through a single window.

c) Steps shall be taken to involve national and international agencies like ILRI, CRIDA, NABARD,NCDC,FAO,IC,SAU,ICRISAT in the livestock sector of Andhra Pradesh.

d) A quality analysis lab will also be established in public sector to conduct quality test and to undertake R & D in this field.

12.2. Role of APDDCF:

APDDCF will be involved actively in supply of inputs (Feed & Fodder) to its members (Milk pourers) and collect milk. It will also supply other inputs like fodder, feed, chaff cutters, silage and other support.

12.3. Role of SHGs / FPOs :

SHGs / FPOs will be encouraged to grow fodder in their land or in the land taken on lease to supply the fodder to other dairy farming members.

12.4. Role of PR institutions :

The Gram Panchayaths will actively be involved in maintenance of community grazing land, land up gradation, revival including maintenance of fodder bank for the village, supply fodder seed.

12.5. Role of Vet. Universities / KVK / Research Institutions:

To develop and propagate new, high yielding drought resistant fodder varieties suitable to even saline soils, the KVKs / other research institutes will be involved. These institutes will also be involved to evolve new techniques of fodder preservation, enrichment etc. and will also promote research on different types of crop residues for their better utilization.

12.6:- Role of ILRI (International Livestock research Institute)

ILRI will provide technical guidance for promotion of dual purpose crops and cultivation of fodder verities with high digestibility content.

12.7. Method demonstration & Visits (Extension):

Model farms will be developed and the private farms which are already implementing good practices in fodder development initiatives will be accredited by the department as model farms for demonstration to other farmers.

Model fodder production farms will also be established in "Chandranna Kshetram".

12.8. Toll free dedicated number:

Besides attending enquiries on all other activities, a toll free number exclusively dedicated to give response to the farmers' enquiries will be established to provide information on fodder development activities also on the lines of KCC (Kissan Call Centre).

13. FISCAL INCENTIVES :

13.1. Promotion of Certified fodder seed production :

a) Every year the Government will give buy back guarantee for procurement of required quantities of certified fodder seed from the agency / entrepreneur with prior agreement.

b) The certified fodder seed so procured, will be distributed to the needy farmers on 75% subsidy.

13.2. Perennial fodder production:

a) The Government will undertake as much area of perennial fodder development activity as possible every year with 100% support including the support from MGNREGS.

b) The farmers willing to cultivate perennial fodder cultivation with micro irrigation facility will be supported with 90% subsidy on the drip irrigation system.

13.3. Promotion of Silage as green fodder :

a) Individual farmers who wish to go for silage bunkers, 100% subsidiary will be extended towards the cost of bunkers including the support from MGNREGS.

b) FPOs which want to promote fodder silage production, 100% of the cost of bunkers along with the cost of maize cultivation will be met from Government including support from MGNREGS.

c) The identified Entrepreneur who is entrusted with silage bale production by the Government will be supported with 50% subsidy on the cost of equipment, 25% as margin by the Entrepreneur and the remaining 25% cost of equipment as Government advance which however will be recovered from the amount payable every year to the entrepreneur towards the cost of fodder silage for which the Government will give buy back agreement.

13.4. Production of Fodder blocks with Fortified Maize stovers :

The Government will give 50% subsidy on the cost of equipment, 25% as margin money by the Entrepreneur and the remaining 25% cost of the equipment as Government advance, which will be recovered from the amount payable every year to the entrepreneur towards the cost of fodder blocks for which the Govt will give buy back agreement.

13.5. Baling of machine harvested paddy straw :

a) The Government will give subsidy on fodder bales.

b) The cost of baled fodder will be fixed by the Government.

c) The farmer will be distributed baled fodder at subsidized rates.

d) The difference between the total cost of baled fodder and the distribution cost will be supported by Government as subsidy.

13.6. Azolla Production:

The Government will promote Azolla in a big way by providing 90% subsidy.

13.7. Farm Mechanization :

a) On all farm equipment distributed to the individual farmers, the Government will give 75% subsidy except for the equipment related to micro irrigation.

b) The equipment related to micro irrigation will be given on 90% subsidy by the Government.

c) The equipment placed in custom hiring centers will be supported with 100% subsidy by the Government.

d) The Government will support for farm mechanization at least Rs. 200 lakh per annum.

13.8. Fodder Bank :

a) The Government will provide 100 % subsidy for construction of godowns at needy places.

b) The fodder procured on agreement by the Government will be stored at these fodder banks.

c) The distribution cost of silage bales / dry fodder bales / maize stover blocks will be decided by the Government from time to time.

13.9. Inter Cropping of fodder crops in Horticulture groves:

a) The activity will be promoted in convergence with Horticulture department.

b) The Government will support inter cultivation of fodder with 75% subsidy in the form of supply of leguminous fodder seed varieties in as much extent of area as possible per year.

13.10. Fodder cultivation with IWMP (Integrated Watershed Management Programme) funds:

a) The Government will promote fodder development activity in water shed areas with special focus on development of pasture / degraded pasture lands including fodder tree plantation in convergence with Rural Development Department with 100% subsidy support.

b) Fodder development will be taken up in water shed areas as per the availability of funds every year.

13.11. Tank bed fodder cultivation:

a) The Government will promote tank bed fodder cultivation in perennial drought prone districts.

b) The activity will be promoted with community participation on 100% subsidy including cultivation cost.

13.12. Rejuvenation of CPRs (Common Property Resources) :

a) The tools and equipment required along with the cost of fodder seed besides fencing cost will be supported with 100% subsidy by the Government.

b) Every year, the Government will undertake rejuvenation of degraded CPRs including local bodies/identified agencies in as much area as possible to rejuvenate the CPRs.

13.13. Promotion of fodder cultivation in Forest fringe areas :

a) The fodder developments activity in forest fringe areas will be promoted only through VSS only.

b) The Government will support the fodder development activity in forest fringe areas with 100% subsidy.

c) The Government will support for undertaking fodder development activity in as much area as possible in forest fringe areas.

13.14. Plantation of saplings that can yield fodder :

a) The Government will support this activity with 100% subsidy.

b) The Government will support plantation activity involving NGOs / Local bodies / Sheep societies in as much area as possible.

13.15. Promotion of Hydroponic Fodder as commercial activity :

a) The Government will support the activity on 75% subsidy for establishment of the unit.

b) The Government will support this activity every year to encourage new units.

13.16. Fodder development in vacant Government land:

a) To encourage cultivation of fodder in vacant Government lands where ever 100 acres of cultivable land is available in the districts.

b) Rs. 500 lakhs will be provided by the Government as corpus fund to develop infrastructure required for cultivation of fodder in the common land.

13.17. Special package for natural calamities:

a) The Government will keep a corpus fund of Rs. 1000 lakh to continue the existing policy of the Government to supply dry fodder and concentrate feed at concessional rates on all the occasions of natural calamities.

13.18. Rewards & Recognition:

a) The Government will provide Rs. 50 .00 lakh every year to the department to give rewards to those local bodies & NGO organisations which have actively participated in the community fodder development activities.

13.19. Source of Funds:

To prepare the "Fodder Security Policy, 2015-2020" for Rs: 250.00 Crores (Rs: 100.00 Crores from Government funds and Rs:150.00 Crores from MGNREGS).

14.0 Infrastructure Strengthening / Development:

a) Construction of fodder banks will be considered on a priority basis at block/mandal Headquarters of all fodder stress mandals in Rayalaseema districts.

15.0 Market Development

a) Sale of dry fodder blocks/silage bales will be promoted through the extension net work proposed to be created in addition to the marketing of product through village organizations involving SERP

b) Built in Incentive will be extended to self help groups to encourage Thrift & Micro-credit for market development of fodder and income generating enterprises for reaching the 'unreached'.

16.0 Public Private Partnership

Infrastructure facilities like silage balers, hay balers, fodder block making units, heavy duty chaff cutter, crop harvesters, pivot irrigation equipment etc along with all facilities required will be supported.

17.0 Institutional Strengthening

a) Monitoring is an essential component for successful implementation of the policy. Mechanism such as "State Level Steering Committee" shall be constituted in the Animal Husbandry department for implementing this policy.

b) A task force committee headed by Principal Secretary, AH, DD & F as chairman, Director of Animal Husbandry as member convener and other major stake holders as members shall be constituted to deliberate on the issues concerning implementation of fodder policy.

c) At District level, the District Level Committee (DLC) headed by Joint Collector (Primary Sector Mission) shall monitor for implementation of the Policy.

d) The extension personal required for implementing this policy will be recruited by Animal Husbandry department.

18.0 Policy Outcomes:

The implementation of the Fodder Policy, 2015 is expected to yield the following outcomes:

a) Increased production and productivity of livestock by 15-20% increasing the GSDP contribution of livestock Sector.

b) Improves general health of livestock and reduces susceptibility to diseases.

c) Prevention of post harvest losses of fodder up to 30%.

d) Better infrastructure and logistics facilities in the sector ensuring the availability of fodder round the year.

e) Increased awareness to the farmers on resource management.

f) Changes in feeding practices in livestock and reduces the cost of production.

g) Better nutritional support to the children on account of increased availability of livestock products.

h) Empowerment of women groups

i) Promote Sustainable dairying in the State.

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